THE INTERNATIONAL NICKEL COMPANY
OF CANADA, LIMITED

ONTARIO DIVISION
MINING AND SMELTING DIVISION

COPPER CLIFF
ONTARIO

4-19-65
MW Energy for your info T. Pinder

April 15, 1965.

Mr. T. T. Pinder,
Kennecot Copper Corporation,
Utah Copper Division,
SALT LAKE CITY, Utah, 84111

Dear Tom:

I have enclosed the literature on tailings seeding procedures plus a write-up from the paper.

No doubt there is more information available regarding details of planting etc. It would therefore be advisable to visit the area sometime during June or July.

We sure enjoyed having you fellows up here and can hope that we will get together down in your area soon.

Yours very truly,

Mel Young

M. E. Young,
Superintendent of Safety.

MEY/pc
Enc.

0001

THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED
Ontario Division

TAILINGS SEEDING PROCEDURES

Two procedures have been used in grassing the tailings area. The first one has been developed over the years to the point where it is basically as follows. It is of primary importance to commence seedings on the windward side to the prevailing winds of the tailings area to reduce covering and blasting of the young plants by drifting tailings. A preliminary application of agricultural limestone is made, preferably two to three months prior to seeding, followed by an additional application at seeding time to adjust the tailings to a ph range of 6.5-7.0. This range is suitable to most crops. At both times the lime is disced into the tailings.

At planting time, a balanced fertilizer, (we are currently using an 8-16-16 ratio) is applied in two stages. Approximately 500 lbs. per acre is broadcast and harrowed in after the second liming. An additional 300 lbs. per acre is applied with the seed.

A standard farm grain drill fitted with double grass seeders is used for planting the companion crop and all the grass seeds except the Brome Grass seed, which because of its bulky nature is broadcast immediately after the general seeding and before cultipacking. We have found that firming the tailings with a cultipacker after seeding is beneficial. If seeding is done during August, rye at the rate of 1½ bushels per acre is used as a companion crop. On the other hand, if seeding is done in the spring, oats at the same rate are used. From our experience, fall seeding (early August) is preferable as weather conditions are generally consistently better at this time of year for insuring a successful catch.

Over the years, Canada Blue has been our most persistent grass with Red Top a close second. Chewings' Fescue, Brome, Timothy and Crested Wheat are doing well and are included in our mixture. Alfalfa, Sweet Clover and Birdsfoot Trefoil are the legumes being used. The Alfalfa and Birdsfoot Trefoil are showing persistence in trial areas while the Sweet Clover does well the first year but then fails to reseed itself. The fact that the legumes do better, if they are seeded in the Spring, has presented seeding problems. We are still experimenting to obtain better seeding techniques for them.

Our grass seed mixture and rate per acre is as follows:

12½ Lbs. Canada Blue
12½ Lbs. Mixed Seed (2 Parts Timothy,
2 Parts Red Top,
1 Part Chewings Fescue,
1 Part Creeping Red Fescue,
1 Part Crested Wheat
1 Part Kentucky Blue)

10 lbs. Sweet Clover (should be innoculated)

The above are mixed together prior to seeding.

10 Lbs. Brome Grass (sown separately)

All implements used in our grassing programme are standard farm implements.

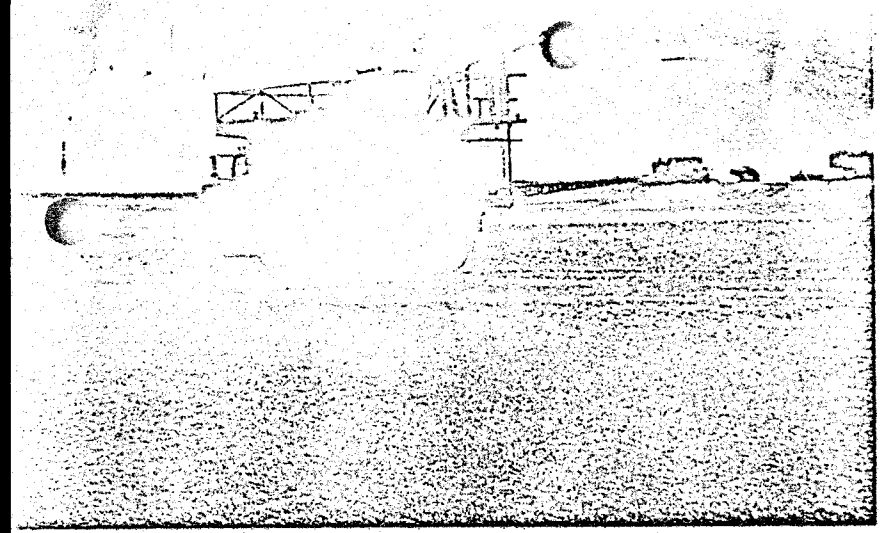
After the grass is established it is cut at least once a year and a regular fertilizing programme is carried out to maintain good growth. At present our programme includes an application of 80 lbs.per acre of 45% Urea in the late fall after freeze up and an application of 200 lbs.per acre of 8-16-16 fertilizer in June. Annual ph tests indicate when areas require additional liming.

The second procedure using a wood fibre mulch was tried for the first time in the summer of 1964. This method uses a low grade woodfibre which is agitated in a truck mounted tank with water to make a slurry. Then seed, fertilizer and an asphalt binder are added. After an area has been prepared by cultivating and liming as required, the aforementioned mixture is sprayed over the area to be seeded. The results of this method of seeding are still to be fully assessed.

On the basis of our experience to date, the seeding costs average approximately $300.00 per acre and the annual maintenance costs average approximately $30.00 per acre.

CAY

CAY/wz
Feb. 15/65



ne mulch of low grade pulp paper, asphalt, fertilizer, grass seed and water sprayed from a tank truck in the latest experiment in tailings stabilization t Copper Cliff. Picture on the right shows the low grade paper being fed in cakes to the mixing tanks; it combines with the asphalt to form a bonded crust which it is hoped will hold the tailings down until the grass gets started.

Sprayed "Paper Blanket" Ties Down Tailings Until Seed Gets Foothold

Inco's long-fought campaign to abilize with vegetation the surace of the tailings disposal areas est of Copper Cliff has proressed to the point where more an 400 acres of this barren rock aste has been transformed into vely rolling pasture land.

Full credit for the remarkable storation goes to the Company's gricultural department whose ntinued efforts and experiments, the face of most discouraging tba..., have written a new apter in agriculture.

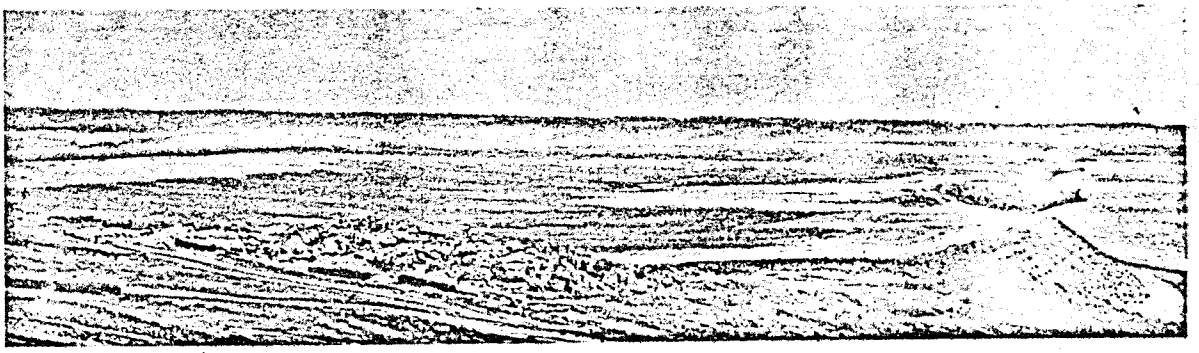
Despite their almost unbelievble success however, they have een waging a losing battle with ertain sections of the tailings reas that have stubbornly rested all treatments and inducements to grow grass. And so this mmer still another phase of this reat experimental program was ntered upon with the trial of a ray mulch method of seeding.

The recalcitrant areas are high lateaus invitingly exposed to the prevailing westerly winds. Conventional attempts at seeding failed as the seed was either buried or blown away before it had time to germinate. Two successive seedings were blown away last spring. Now the latest wrinkle is to tie down such areas with a mulch while seed is germinating.

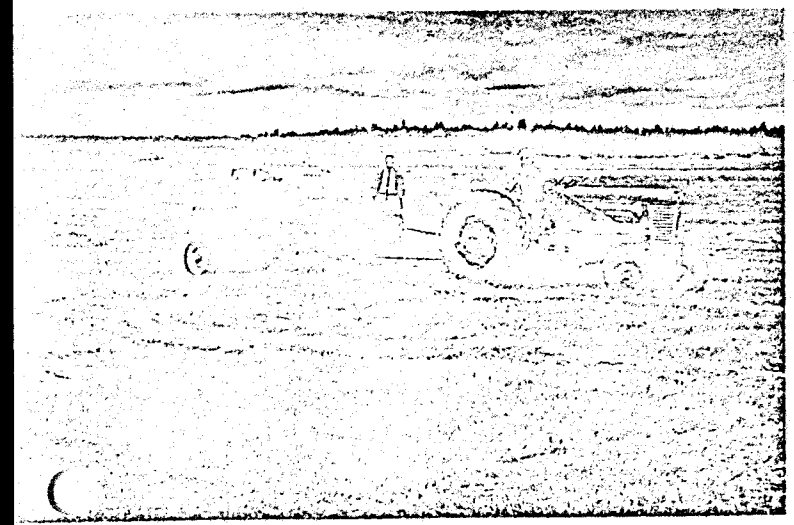
A target area of some 80 acres was selected for this experiment and a commercial concern named Sprayturf, Limited, moved in with its equipment and blanketed the area with a wet mulch. It is hoped that the bonded crust formed over the surface by the mulch will baffle the wind action on the sandy tailings until vegetation gets a foothold.

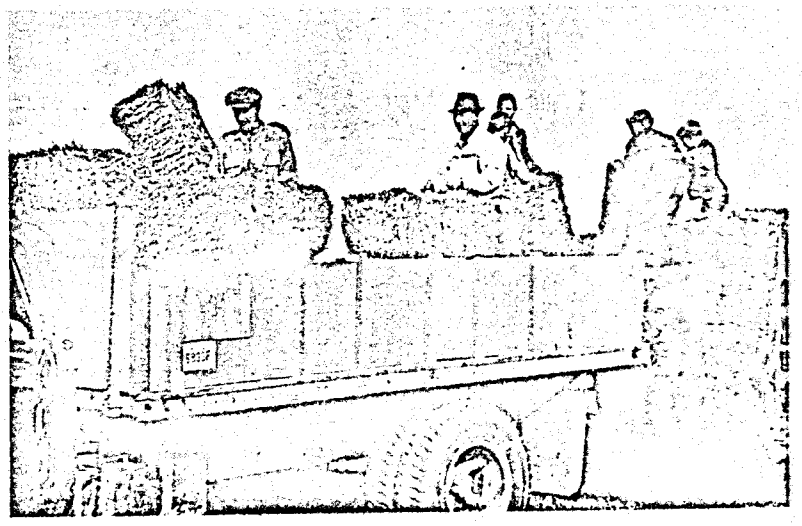
The mulch, a mixture of water, asphalt, low grade pulp paper, fertilizer and grass seed, was agitated in tanks on a specially constructed truck and sprayed under pressure from a pair of hose nozzles.

The area had been carefully prepared before mulching. It was disked, limed, then seeded with rye and harrowed. The rye will provide a protective "nurse" crop for the more delicate and slower growing grass seed. Although no results are yet apparent in this recently completed project, the



Another phase of the current tailings stabilization program is illustrated above; banks of tailings areas are being faced with crushed rock. The area shown is sown to grass but the banks were too steep for this treatment and were at the mercy of the wind until tied down with development rock from Copper Cliff North mine.





fine crop of over 4,000 bales of hay was harvested last month from old ailings areas now converted from a dusty desert to productive grassland. nco assistant agriculturist T. H. Peters is seen watching the hay baler in ction. With a shortage of hay in the Sudbury district this year, the Inco crop was quickly sold. Picture on the right shows Bernie Scharf, shipping shift boss at Copper Cliff, assisted by a couple of his sons and their pals, stacking a truckload of winter feed for the two riding horses at his ranch home on Highway 17 west.

[illegible] born in 1[illegible] in the former village of Humberstone, now part of Greater Port Colborne. On leaving school he started to work for his father, learning the plumbing and tinsmith trade. He later worked for several years making shoes at the Humberstone Shoe Company.

In 1941 Omer started with Inco in the pipe shop and for the past 20 years has demonstrated his

Mr. and Mrs. Trayner

"know how" at tinsmithing and pipefitting.

Chris. MacPhail, mechanical superintendent, has the highest praise for Omer's ability.

In 1924 he married Miss Doris Caughell. They have one daughter, Linda, who has her Arts degree from McMaster University and is continuing her studies at the Ontario Teachers' College.

Their many friends wish Mr. and Mrs. Trayner a long, comfortable retirement and hope that his leisure time will result in added improvement in Omer's health.

Mike Cupor

Big Mike Cupor has retired from the Copper Refinery on early service pension. "I was inspector in the tankhouse for 20 years," he said proudly. "I worked at the refinery since 1934."

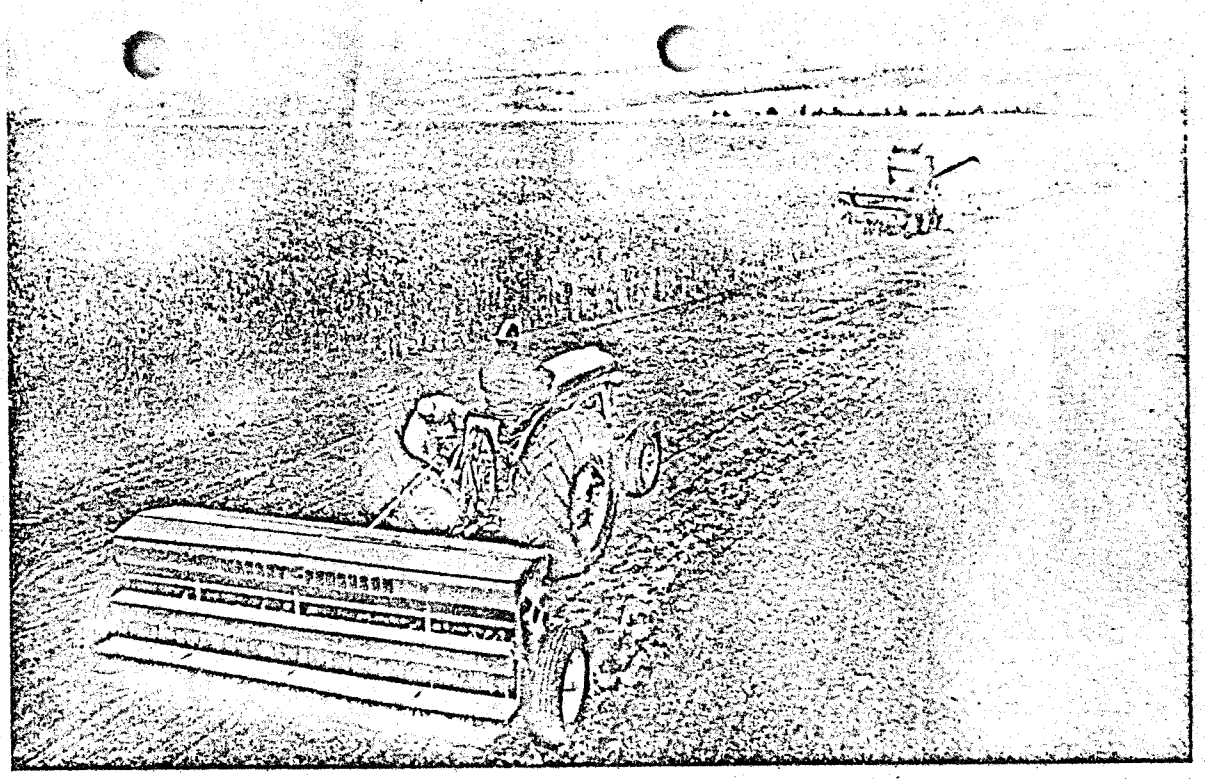
Mike Cupor

Mike helped Fraser - Brace build the Refinery in 1930, then for three years during the depression had nothing but odd jobs around Sudbury. "I had some good friends in town though who helped me," he added smilingly.

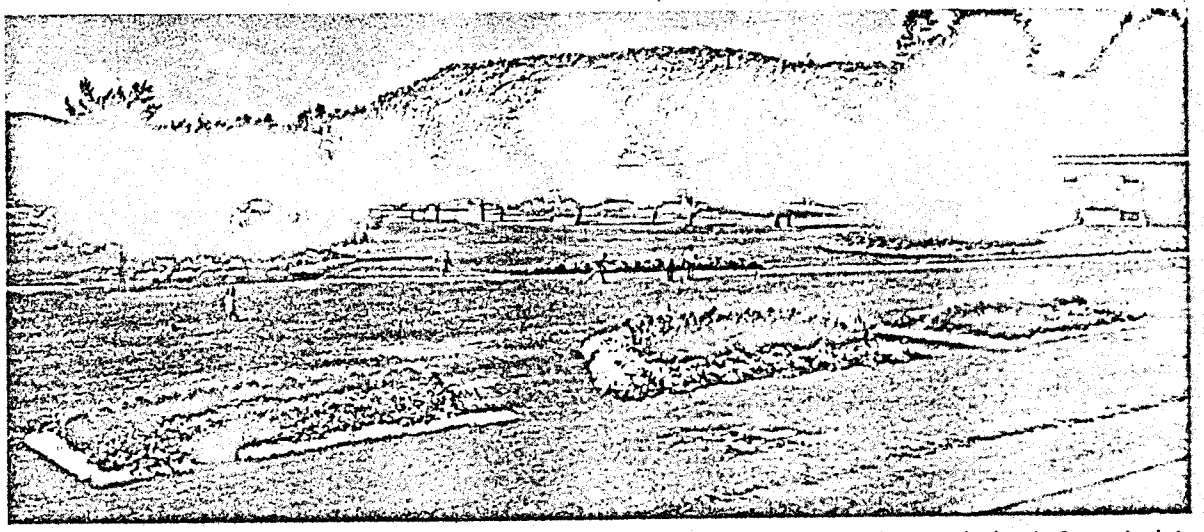
Mike was born at the beginning of the century in Jugoslavia and came to a farm near Edmonton in 1926. The next four years were spent on farm, railroad or in the bush out west, then he came to Sudbury and the start of better living.

Frances Jurage became Mrs. Cupor in 1920 and she and two married daughters, Barbara and Lillian, along with a son Winston, have remained in the old country. Another son, Frank, works in Sudbury. Mike made a trip back to Jugoslavia last year and is now decided where he would sooner live. "Canada is the best place, of course," he said, "but most of my family are over there so I don't know yet what I will do."

Meanwhile Mike is taking life easy and giving his bad leg plenty of rest.



There was no waiting around for the grain harvested this fall at the Company's experimental farm on the tailings disposal area west of Copper Cliff. It went right back into the business. Almost as fast as it came from the combine the high-grade rye was loaded into the seed drill and sown as a nurse crop along with grass seed to stabilize another stretch of barren rock tailings. Picture shows seed drill and combine passing on their rounds. The combine as usual was set to leave a high stubble to act as a snow-catcher for the grass which, this year, grew along with the grain. This summer's work completes over 400 acres of the tailings disposal area stabilized with grass brought along by a special fertilizing program developed through years of experiment by the Inco agricultural department.

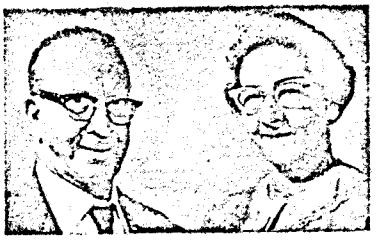


AN INCO AGRICULTURAL DEPARTMENT MASTERPIECE with which the public is more familiar are the lovely flower beds in Nickel Park, Copper Cliff. These creations of the horticultural art at its finest, annually an eye-stopper, seemed even more beautiful than ever this summer, and prompted many a warm compliment for park foreman Alec Gray and his assistants.

Tom Rennie

In the south of Scotland where the Solway's tide rushes in faster than a galloping horse, Tom Rennie was born in 1898. He came to Canada in 1923 and settled in Ottawa for a time, before deciding to see many parts of his adopted country. Tom had a "roving hoof" so he farmed on the Prairies, sluiced and mucked in the gold mines, slashed, rolled and cleared in the lumber camps and helped in the building of roads and bridges.

Tom settled down in the Niagara Peninsula and took a job with the Diffin Construction Co. in Welland where he worked for six years. In

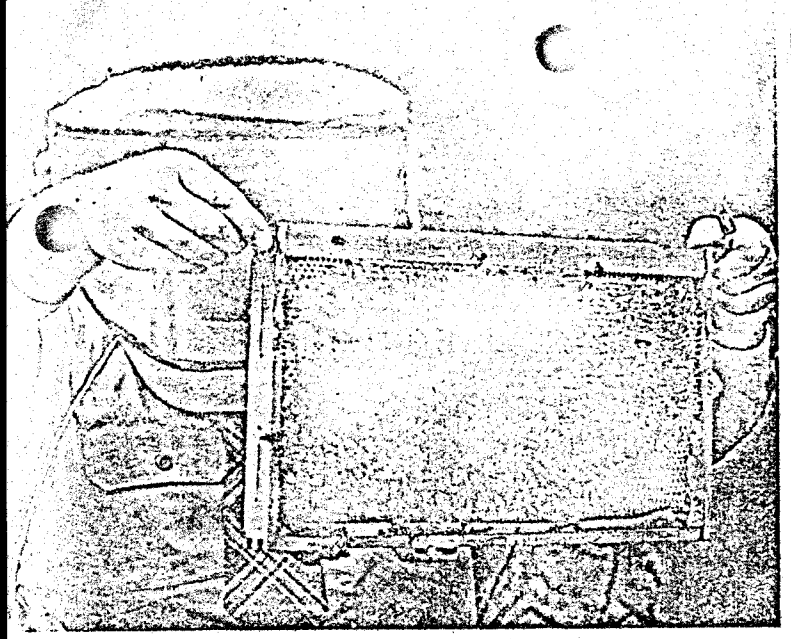


Mr. and Mrs. Rennie

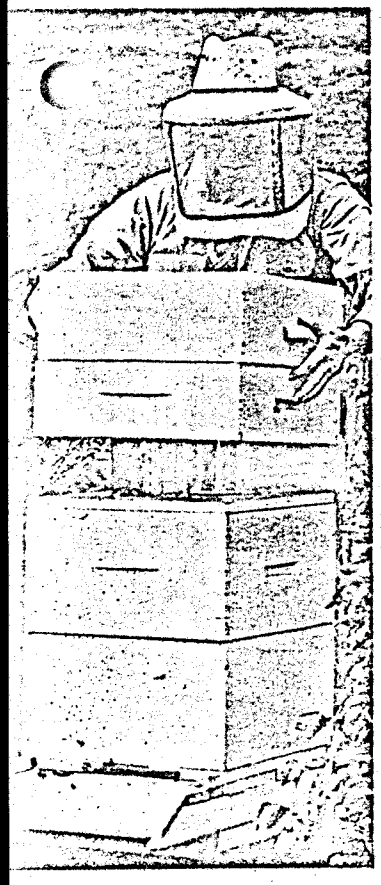
1936 he came to Inco and started in the sinter building. He was transferred to the electrolytic department in 1937 to work on the units and in his 27 years' service has been steady, trustworthy and co-operative.

Myrtle Burr became Tom's wife in 1933, and they have a family of four: Pat (Mrs. Bob Davis) of Keswick; Dr. John Rennie M.D., practising physician in Oshawa; David and Gloria, both at home. Doctor John Rennie was one of the first Port Colborne students to receive the Inco scholarship to assist in his education.

On his retirement at 65 years of age Tom received a gift of legal tender from his workmates as a token of their respect and friendship, James H. Walter and Bert Lindenas doing the honors. Mr. Walter thanked him for his 27 years' service to International Nickel and hoped that Mr. and Mrs. Rennie would enjoy their retirement for a long time to come.



Tony Frick holds up one of 20 frames from his hive to show the bees busy with their duties. The frame supports a flat stamped sheet of wax on which the bees build their hexagonal cells to hold either honey or food, or brood consisting of young bees in the egg, larva, or pupa stages. The bees in the centre of this cluster are nurse bees, covering brood to maintain it at a 90-degree temperature, while around the brood area other bees are filling and capping the comb. As the brood hatches out, the worker bees clean and polish the wax sheet until it shines like a mirror, whereupon the queen bee lays more eggs.. "Nurse bees," says Tony, "feed and look after newly born bees, then graduate to other jobs such as guard bees, water carriers, undertakers, garbage disposal, comb building, pollen gatherers, and finally — the top job — nectar gatherers." There are about 2,000 bees in the above picture.



Wearing his metal bee veil Tony Frick is placed two tins of sugar syrup in the hive as food to replace the winter's supply of honey stolen by the marauding bumblebees from storage frames, which are set above the brood frames in the hive.

Hive Plundered By Bumblebees

An extremely rare incident in the usually tranquil realm of beedom has been reported by Tony Frick, whose hive of peace-loving Corsican bees was attacked and ravaged by a swarm of bumblebees.

The provincial department of agriculture has asked for a full report of the unprovoked act of aggression, and will publish a bulletin on it.

Coming from their nests in the cracks and crevices of nearby rocks, the swarm of bumblebees overcame the guard bees at the hive by sheer weight of numbers, forced their way through the tiny entrance, and, according to bee fancier Frick, "caused tremendous havoc" in stripping the hive of its winter supply of honey.

The beleaguered Corsicans fought bravely and killed many of the marauders, but eventually their queen, for the preservation of the race, ordered a retreat and fled from the raging hive with a swarm of about 30,000 of her subjects. Tony thinks they have probably set up light-housekeeping in an old tree stump somewhere in the area, but whether they will ever return to the hive he couldn't guess.

Some 35,000 Corsicans were left behind to clean up the mess after the surviving invaders had departed. Gradually they dragged the corpses of the slain enemy out of the hive and set about re-establishing order. They built a queen cell and now have a new queen, and the colony is functioning once more.

A constable in the Copper Cliff police department, Tony Frick started his hive of Corsicans last spring beside a field of clover on the Inco agricultural department's "experimental farm" on the tailings disposal area west of Copper Cliff. Later he moved it to a spot near his home at Long Lake, where it was thriving until attacked by the ravagers from the rocks.

Tony Frick points to a couple of guard bees which are mauling over a bug that tried to enter the hive. The gadget on the ground is a smoker; when smoke is puffed into the hive the bees think it's a forest fire and load up with honey, ready to take off, and are then easier to handle.

Poise is the art of raising the eyebrow instead of the roof.

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the winter of 1911," Jack [illegible] recalled, "at old no. two shaft. I was just 14 and had come over from the old country earlier that year."

Jack has now retired from Creighton on disability pension. His continuous service dates only from 1928; the intervening 14 years he spent on various jobs about the country. He left Creighton in 1916 and worked for a short time at Nobel before going to Blind River where he put in five years in the lumber camps and mills.

Next stop was Port Arthur where, after helping build a boat for the Canadian merchant marine, he sailed on it the next two years, then spent a couple of years on Great Lakes freighters. "Later," Jack said, "I had a good job at Windsor working for Hiram Walker. I came to visit a friend at Creighton in 1928, went to see the mine again and Charlie Lively gave me a job. So here I am!"

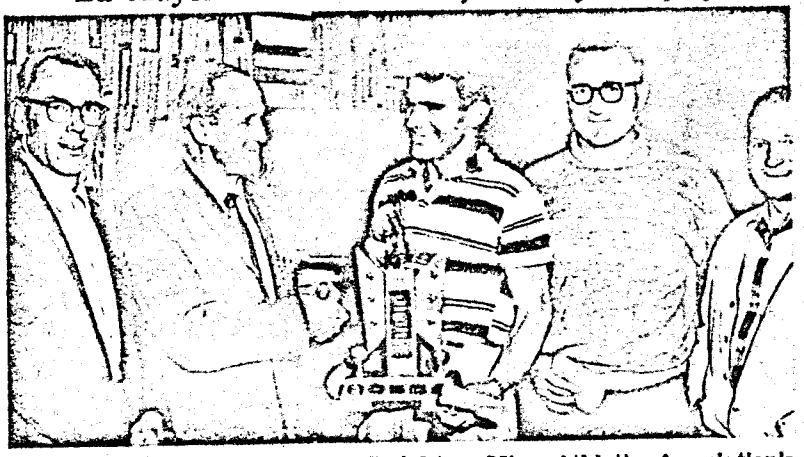
Jack helped sink no. four shaft and drove drifts and raises before taking over as skiptender at no. five shaft, the job he held the past 15 years.

Married at Creighton in 1929 he has a son, John, in Toronto and one grandson. Taking the summer sun to help relieve his arthritic condition has been his chief vocation this past few months and right now he is bronzed as an Indian. Feeling much better for it, he is thinking of heading south this winter.

NICKEL IN ELECTRONICS

In the field of electronics, nickel forms the base of cathodes in practically all small and moderate size radio and television tubes, and is used in the deep sea portion of the Trans-Atlantic telephone cable.

Ed Mayer Led Winners of Massey Trophy



Winners of low net honors in Creighton Mine Athletic Association's annual golf tourney are shown here: on the left Lyall McGinn, Archie Massey presenting his trophy to Ed Mayer, and on the right Ray Burkhart and Allan Steele. The Rock Iron trophy for low gross went to Casey Caul, Les Parr, Gary Foy and Bert Behenna. Individual low gross and low net stars in this popular annual outing were Ed Mayer with a 75 and Casey Caul with a 67. Bob Brown won the most-honest-golfer award by turning in a 121, as well he should have. Kudos for the success of the event went to Hurly Hreljac, Lyall McGinn, Walter Chornenky, Paul Marcinishyn, and Gordon Bennett.

INCO TRIANGLE

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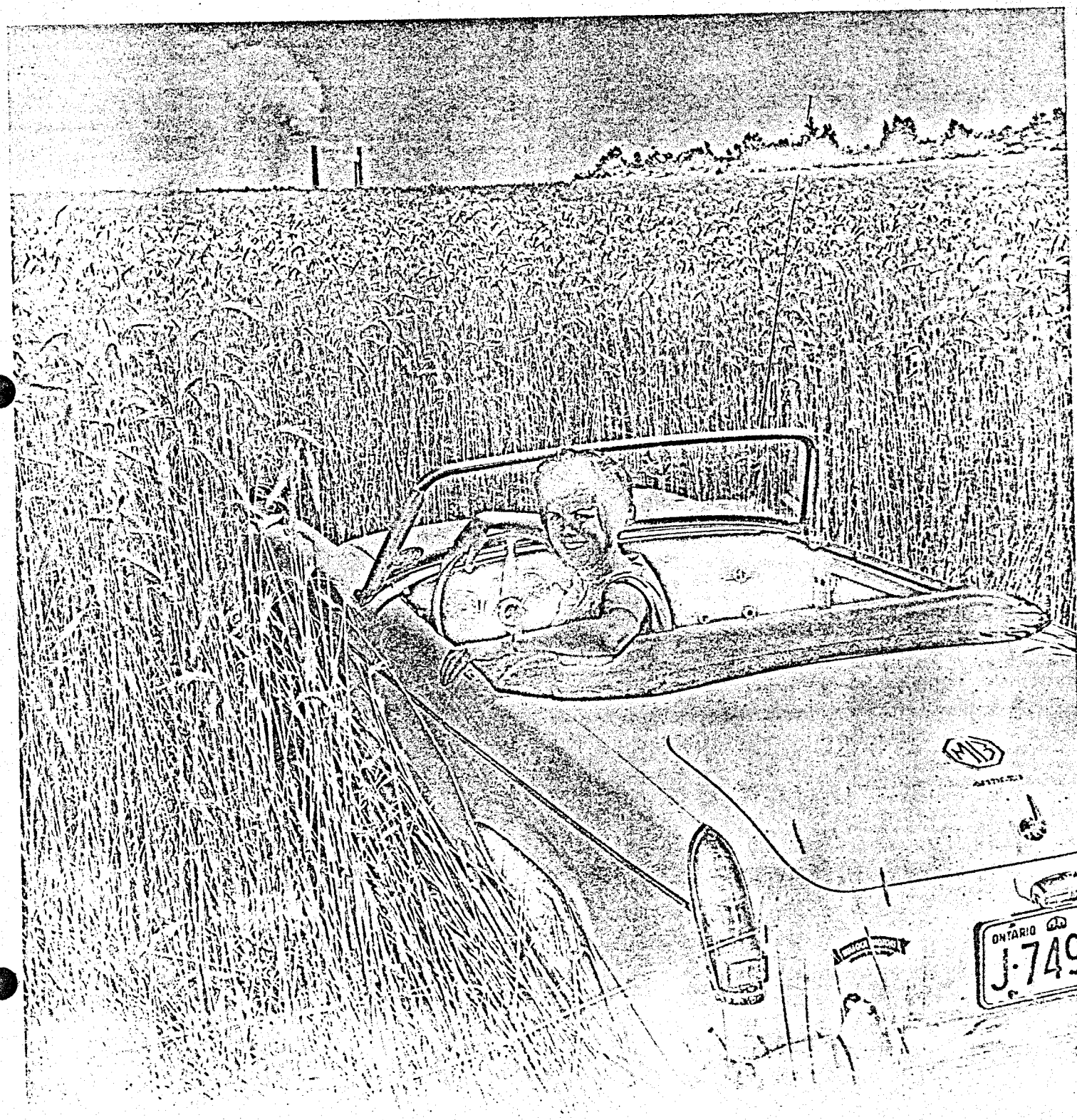

lished for all employees of The rnational Nickel Company of Canada, Limited.

D. M. Dunbar, Editor
L. Meredith, Assistant Editor

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Nickel-Cad" Team Real Powerhouse

Expansion of "another important rket for nickel" was forecast by chairman of the Company, ry S. Wingate, in discussing the spects for the "powerhouse" m of nickel-cadmium.

n a letter to Inco shareholders . Wingate stated:

'Telstar in its spectacular debut t month had significance for the ire world as it journeyed ough outer space to beam the st intercontinental television adcast. But the Telstar satel- e also has special significance for ternational Nickel.

This is because the Telstar com- [illegible] from portable electric mixers and television sets to hedge clippers and sound movie cameras.

These nickel-cadmium batteries combine the compactness of the familiar dry cell and the rechargeability of the storage battery. Other nickel-cadmium batteries come in many types, shapes and sizes, ranging from cells as small as buttons to very large batteries weighing more than 100 pounds for jet engine starting and emergency power systems.

Nickel-cadmium batteries perform effectively for years and may be recharged to full effectiveness hundreds of times. They can operate in any climate — from the coldest to the hottest. They require virtually no maintenance other than recharging. They may be stored indefinitely in a charged or discharged condition. They can be used for any application, including those demanding sudden, heavy current discharge and fast recharge. Products powered by nickel-cadmium batteries may be used safely in bathrooms, kitchens, and on beaches — even outdoors in rainy weather.

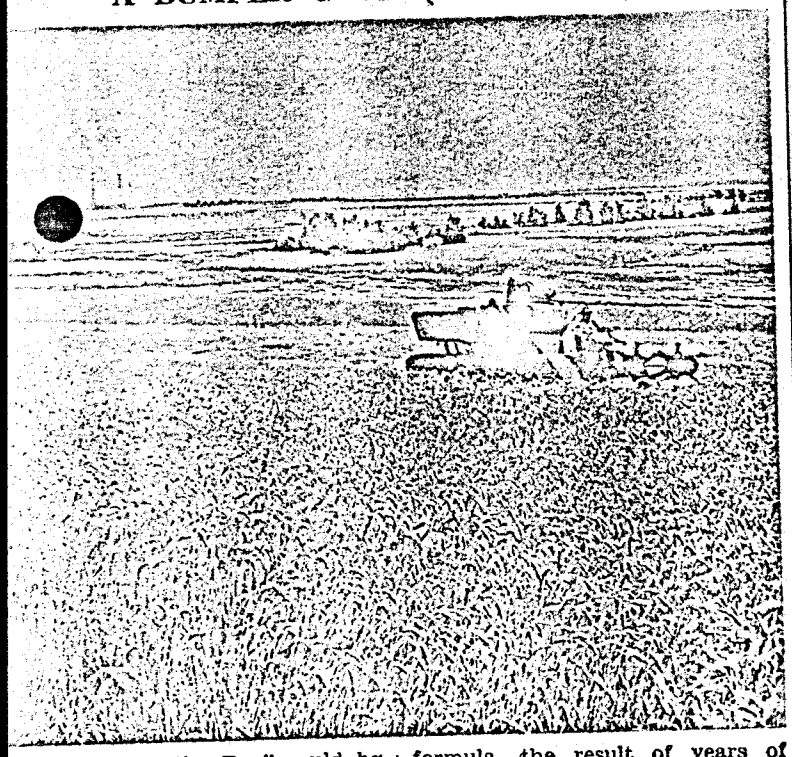
The nickel-cadmium battery in the Telstar satellite is recharged by solar cells held in place by platinum — another of our important products. The portable consumer appliances powered by nickel-cadmium batteries are provided with separate or built-in chargers, and need only to be plugged into an electric outlet and left there overnight to be fully recharged.

Nickel plays a vital role in the type of battery which is used in the Telstar and in the wide variety of electrical products that require no extension cords. This is a sintered-plate nickel-cadmium battery, a scientific development perfected in recent years, in which plates formed from high-purity nickel powder, impregnated with a nickel compound and with cadmium, store the electrical energy in the battery. Nickel is used not only for these plates but also in other parts of the battery because it offers the corrosion resistance and mechanical and electrical properties required for maximum performance and durability.

International Nickel has worked closely with battery producers in all parts of the world in their efforts to improve methods for the production of this new type of battery. Further, it has co-operated with battery manufacturers, fabricators of end products and others in defining and enlarging its potential applications.

Telstar has only dramatized the usefulness of nickel-cadmium batteries. The growing demand for these batteries is expected to result in the expansion of another important market for nickel."

A BUMPER CROP (Front Cover)



"Goin' Thru the Rye" could be another title for our cover picture, although it looks as if pretty Diane Matthews isn't going very far against that solid wall of shoulder-high grain.

In any event it's a case of "bumper to bumper" as her sporty little MG is about to get lost in a spectacular crop grown by the Company's agricultural department in another experimental plot on the [illegible]ings disposal area west of Copper Cliff.

That stalwart stand of rye represents further progress in the Company's long and often discouraging search to find a way of stabilizing the surface of the tailings areas. A special fertilizing formula, the result of years of painstaking experiment, conditions the barren rock tailings to support vegetation. Sown as a nurse crop to protect the growth of grass planted at the same time, the grain is harvested by combine in the usual way (see above) except that an extra-long stubble is left to act as a snow catcher, assuring ample moisture to get the grass away to a flying start next spring. Oats and barley have also been grown successfully as nurse crops for grass in other experimental plots in the tailings area.

Miss Matthews, a nurse at Copper Cliff Hospital, was amazed to see the bountiful crop growing with nothing but waste rock for soil.

New Safety Trophy

Charles Paxy

They haven't been aware of it, but Inco's underground mines in the Ontario division have been competing all this year for a new safety prize. To be known as the Annual All Mines Safety Award, it will be presented at the end of each year to the underground mine putting forth the best total effort in accident prevention during the year. Judging will be on the basis of all phases of the Inco safety program.

A striking trophy has been created for the new award, a massive emblem carved in redwood and depicting on its four sides various underground mining operations. Two well-known Creighton artist-miners made it; Steve Smatlanek did the design and Charles Paxy did the sculpting. It's a beautiful trophy, worthy of the high safety achievement it will represent, and certain to be admired by all as Creighton mine superintendent Earl Mumford is admiring it in the above photo.

(Continued from Page 10)

casting operation at the copper refinery from its traditional form to a brand new method conceived and originated by a man who sits close to me at this table tonight — Fred Benard. This was truly a combination of more automation and push-button control than had ever been visualized before, and what was the outcome? In a few short years Orco became the world's leading producer of special shape copper castings, with a demand for the product which soon taxed our ability to meet, severely. As a matter of fact Orco is still the mecca for copper refiners, and scarcely a week passes that we do not have visits from experts associated with other copper refining companies. They are free to admit that the quality of our copper products is never excelled and rarely equalled.

Iron Ore Plant Another Example

"I made brief reference last year also to an announcement which I said would shortly be made regarding our iron ore recovery plant. Today, as you are all aware, our $50,000,000 expansion program is in full swing, and the outcome will be that we shall be able to treat ore which otherwise would have been impossible to handle economically. In this case too, we have a highly mechanized, many push-buttoned plant, and yet, as a result, we shall be providing employment and lengthening the life of our operations in this area."

Although some expected the contrary as the result of automation, the "total number of personnel on the Inco payroll in the Sudbury district has shown a consistent growth during the post-war period, and during the past 12 months reached an all-time high," said Mr. Gordon.

"I am optimistic about the future of Canada, and more particularly of this district. You have experienced a high and stable level of employment during a time when the remainder of the country was experiencing quite serious problems of unemployment. I said last year, and it bears repetition, that 'we at Inco are not in the business of

"There will continue to be new mines, new plants and new pits opened in the Sudbury district.' Since that time you have seen the new surface plant on the skyline northwest of Copper Cliff. In the same area our new Clarabelle pit is readying for initial operations later this year. The steel work for the enlarged iron ore plant is apparent to all who pass by. Possibly I should again remind you that the new mines and plants referred to are required to stabilize production here in conformity with the optimum levelling-off-long-range planning of our company. They are not designed to provide expanded production. As an example the Frood-Stobie open pit operations were finally ended on May 10, and replacement production such as the new Clarabelle pit and others is being readied."

Rising Costs

In concluding his address the president touched on the matter of the nickel price change of June 30. "Prior to that change the most recent price change for nickel had occurred in December, 1956. Since that time, built-up costs in Canada alone, exclusive of taxes, amounted to more than $50,000,000, actually much more. During the same period Canadian taxes increased by a total of some $17,000,000. There were also, of course, substantial cost increases elsewhere, including as you well know very large expenditures for expanded research and development programs to maintain and increase the use of nickel. There were also increases in taxes in foreign countries.

"As a result the cost of producing nickel, including taxes and improved efficiencies of all kinds, showed a net cost increase in excess of 8½ cents per pound over 1956. The price increase of 7¼ cents to 7½ cents per pound was therefore substantially lower than the indicated increase should have been. I would like to stress that the new price contains no cushion for any future increased costs, including any increased labor cost, nor is it designed to cover any part of the excess of $50,000,000 that has been charged to operations since 1956. It is simply to readjust the situation and not to continue the inequity.

"Assuming our sales to be on the order of 350,000,000 pounds per year, our margin of profit based on the new price will be no higher than our margin of profit was after the December, 1956, increase. Our very heavy capital expenditures in recent years, particularly in Manitoba as well as elsewhere, had depleted our cash substantially and we really needed the extra money to permit us to carry out the capital expenditure program with which we are faced in the immediate future.

"We consider it of paramount importance to maintain our company in a strong financial position in order that we will be able to discharge our obligation to our customers, to develop new sources of nickel supply when they are required by industry, and concurrently be able to do aggressive research and market development work to find new uses for a metal which has proved to be so useful to man."

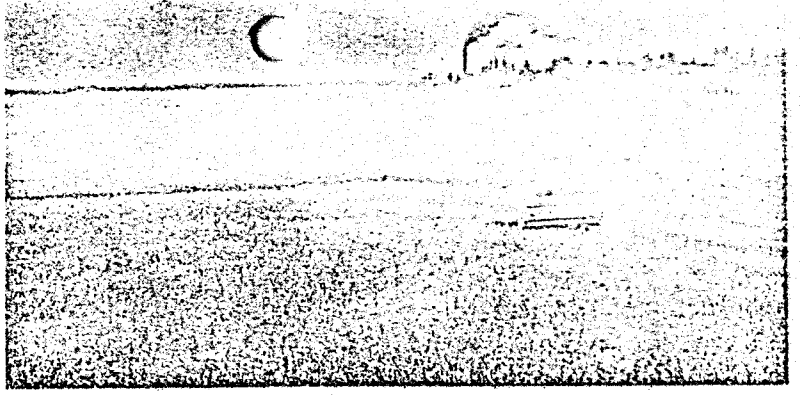
Pensioners Toasted

In proposing the toast to the Company's pensioners, industrial relations manager Norman H. Wadge spoke of the assistance and knowledge they had imparted to younger employees. "These people never hesitated to lend a hand to help us. They gave full support and loyalty to the Company through good times and bad."

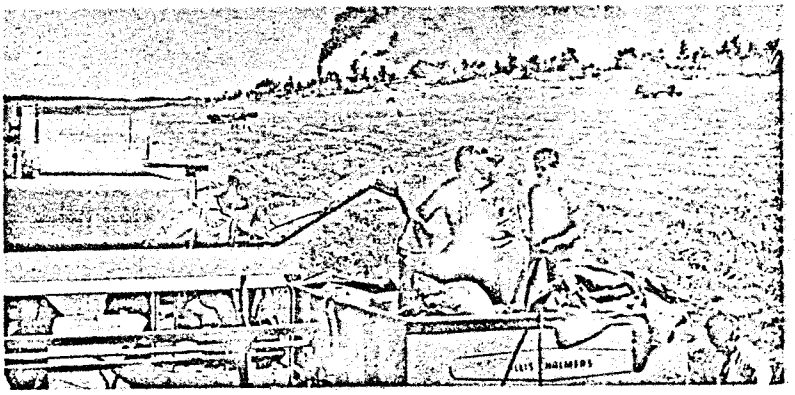
Making graceful acknowledgement of this tribute, J. H. Cullen of North Bay, former underground superintendent at Frood, said he felt honored to speak for the pensioners. "As the years slip by, and time lays its hand more heavily upon us, the great and reassuring security we enjoy as pensioners of Inco becomes of increasing value and comfort to us," he said.

"A Moment of Remembrance" for deceased members of the Quarter Century Club was observed, with the Arena lights dimmed and a spotlight playing on the big club crest above the stage.

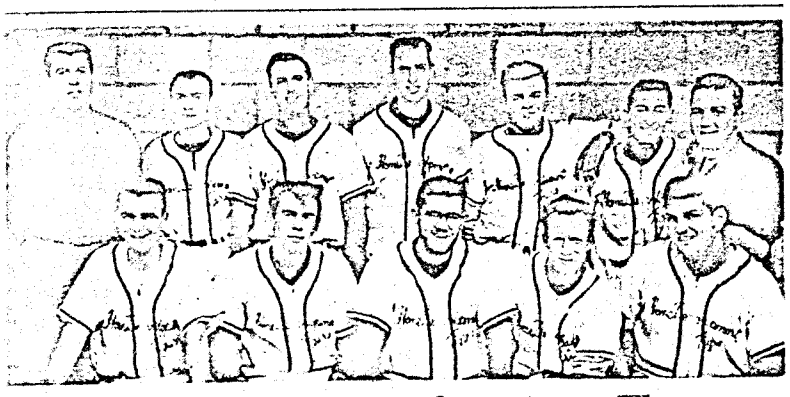
An unusually fine program of entertainment featuring Vic Hyde, the amazing "one-man band", and other outstanding stars of stage and television, with magician Ron Leonard as master of ceremonies, completed another memorable evening of Inco fellowship.



"It must be a mirage!" the average Nickel Belt citizen would have exclaimed rubbing his eyes in disbelief at the scene up on the tailings disposal area west of Copper Cliff one September morning. But here are the pictures to prove it was no dream. A combine operated by Svante Rautiainen worked its way around a fine stand of oats, harvesting the grain which had grown to full maturity with nothing but barren rock tailings for soil. Another encouraging development in the Company's long-continuing experimental program to find a way of stabilizing the surface of the tailings areas, the harvest scene was viewed with pardonable pride by the members of the agricultural department who have worked hard to come up with a fertilizing formula to make the waste rock support vegetation.

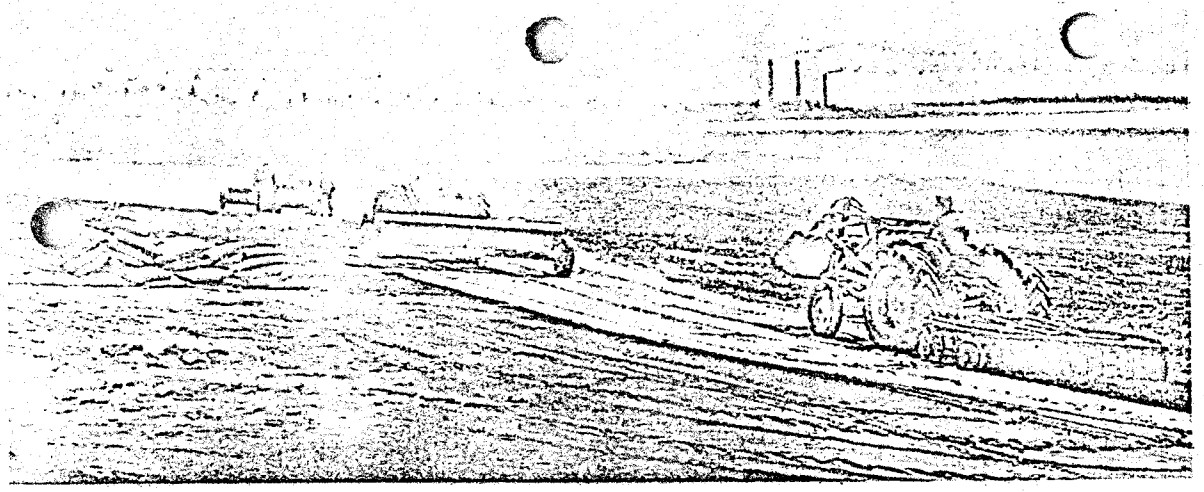


"No. 1 Northern," opined Inco agriculturist Tom Peters, inspecting a sample of the harvested oats being bagged as it is discharged from the combine. A similar test crop of barley was also harvested. The grain will be used for seeding other specially conditioned experimental plots, in which it is sown as a nurse crop to protect the growth of grass planted at the same time. An 8-inch stubble was left by the combine to act as a snow catcher, assuring ample moisture to get the grass away to a flying start next spring.

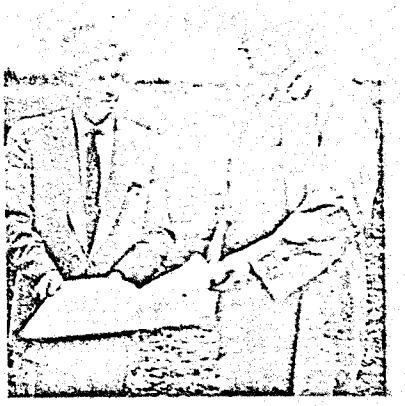


Underdogs Sprang the Big Surprise at Thompson

Classed by many as underdogs when they entered the classy Thompson baseball league, H&H Tigers proved beyond the shadow of a doubt that they had what it takes when they knocked off five straight playoff victories and won the championship. Lots of never-say-die team spirit brought them from behind time and again in their march to the title. In the picture, front row, Bill Costiniuk, Jerry Kraskowski (pitching ace), Terry Glavin, Jim Thompson, Ray Rovere; back row, Pete Turko (Thompson recreational organizer), Ed Kolenich, Barry Benny, Pete Brodkorb, Orest Lazaruk, Ed Friedlein, Bob Young (manager). Not shown, Don Cairnes, Maurice Smadello, Ernie Genik, Wayne Paulkosnick, Dick Hebert, Roland Harrison, Burton Mitchell, Al Smith, Chris Sandelli (bat boy).



Here is a busy scene at the tailings area west of Copper Cliff as another experimental plot is being prepared for seeding.. Lime is being heavily spread and disked in by an agricultural department crew.



C. A. Young, Inco agriculturist, discusses with vice-president R. H. Waddington the development of the current seeding program in tailings areas, now permanently retired from active disposal service.

Encouraging Results Reported in Long Effort to Stabilize Tailings

Encouraging results in the long-continuing experimental program to find a way of stabilizing the surface of the tailings areas west of Copper Cliff are reported by the Inco agricultural department.

"While it is of course too soon to make any definite statement, you can say that we are very much encouraged by present progress, particularly in the areas which have been retired from active disposal service," C. A. Young told the Triangle.

"Despite the light snowfall and rigorous temperatures of the past w[illegible], special seedings of experim[illegible]l plots survived remarkably well."

The problem of stabilizing the tailings from the reduction works has been under painstaking study at Inco for more than 20 years. Many different projects have been undertaken in seeking a practical solution, including windbreaks of willows, snow fencing, water spraying, oil spraying, dressing the slopes with slag, both crushed and granulated, and also with limestone chips combined with sodium silicate spray, mulching with straw, and using a pyrrhotite spray.

Since the tailings are actually just finely ground rock in which there are no nutrients to support growth, they present a tough challenge for the agriculturist. Another factor with which he may have to contend in establishing vegetation is the variation in the quality of the tailings resulting from technical changes and developments in the reduction works processes.

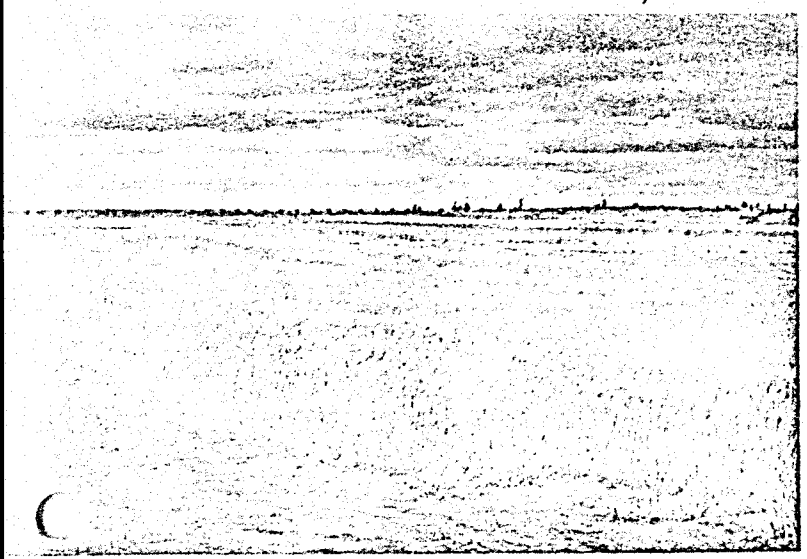
Nevertheless, on the basis of findings to date at Inco and other mining companies where extensive experiments have been carried on, it appears that vegetation is the best practical answer to the problem of permanent tailings stabilization.

Inco's agriculturists have found that lime applied three months prior to seeding is a "must" in conditioning the tailings to get the best results from commercial fertilizer. Tests are continuing on the quantities and intervals of fertilizing.

In current experiments, nurse crops of oats in spring seeding and rye in fall seeding are used to protect the growth of grass seed planted at the same time. Several different varieties of grass seed are under test, including brome grass, crested wheat grass, Canada Blue, and Kentucky Blue, as well as various legumes such as sweet clover, White Dutch clover, alfalfa, and common vetch.

Stabilization of the retired tailings areas with vegetation, if successful, will greatly enhance the Company's extensive program, already well advanced, of beautifying the vicinity of the Copper Cliff plant by the development of large grassed areas. It would be a considerable understatement to say that Mr. Young and his agricultural department staff have the best wishes of the housewives in their efforts.

Mr. Young and Mr. Waddington inspect a nurse crop of rye with a seeding of Canada Blue and brome grass that was planted last September and came through the rigorous winter in good condition. The rye was cut in mid-May to reduce its competition with the grass crop whose growth it protects.



This is one of the experimental plantings made at the tailings area in the spring of 1960. This strip of Canada Blue and brome grass, mixed with sweet clover, appears to be very well established. It has already been cut once this year.

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